RCA Amateur Radio Club
Indianapolis, IN
ARRL Affiliated Club
www.w9rca.org

AUGUST 2023 MONTHLY NEWSLETTER

THE NEXT MEETING OF THE RCA AMATEUR RADIO CLUB WILL BE TUESDAY, AUGUST 8th, 6:30 PM AT NORTH SIDE EVENTS, FORMERLY THE KNIGHTS OF COLUMBUS, 2100 EAST 71st, INDIANAPOLIS, IN

RCA ARC NEWS

JULY MEETING SUMMARY – Well, they had the air conditioning running and if you were seated near the ducts you needed a coat. It was also a bit on the noisy side with the crowd. This was a bit of a problem, but we meet there for free.

We did vote to buy one of the WO-WE basic computers to use for the Echo Link computer at the repeater site. David Spoelstra, N9KT had seen it and sent us an email thinking it might work for the Echo Link computer. The computer comes with Windows 10, 4 USB type A, 1 USB type C, 2 HDMI, Mic/Headphone jack, Lan connector and SDMicro card slot.

It was the Amazon Prime sale days there was a discount. None of us had Amazon Prime and after talking it over we decided to contact John Garino, KF9UH to see if he would purchase it for the club and we would reimburse him for it. Jim, K9RU said he would contact John and ask about buying it.

We had one guest who was retired from Raytheon (Naval Avionics) and is interested in getting a ham license. He had been passing all three classes with practice exam. He said he could not make the scheduled test sessions. K9RU, W9KVK and N9KZJ said they could set up a test session at K9RU's home. He would need to contact K9RU by email to set up the test session.

We did talk about the QRP SDR radios and the one of interest was the uSDX. It can be bought for around $130.

Also discussed was the Yaesu FTDX10 and the FTDX101DX, which are at the top of the Sherwood receiver performance tests. Jim, WB8FAX has the FTDX10 and gave a favorable review.

AMATEUR RADIO LICENSE TEST SESSION

Date:	Saturday, August 12, 2023
Time:	Starting at Noon **by appointment only**.
Location:	Salvation Army EDS Training Facility, 4020 Georgetown Rd Indianapolis, IN 46254-2407
Contact:	Jim Rinehart Ph:(317) 721-1458
Email:	k9ru@arrl.net
Required:	FCC FRN and a completed NCVEC 605 license application form.

Laurel VEC test sessions: **https://www.laurelvec.com/?pg=exams**

Online amateur radio license tests sessions:
ARRL online test sessions: http://www.arrl.org/findonlineexam
Additional online examination dates and teams : https://hamstudy.org/sessions

HAMFESTS, OPERATING EVENTS, VOLUNTEER OPPORTUNITIES

Salvation Army Open Net, Thursday, 7PM, W9RCA repeater, 146.88 MHz, tone 88.5 HZ

August 5 - 6 – ARRL 222 and Up Distance Contest, www.arrl.org/222-mhz-and-up-distance-contest.

August 5 - 6	Ten Ten International Summer QSO Party https://www.ten-ten.org/
August 11	Fort Wayne Tailgate Hamfest, Purdue Fort Wayne Parking Garage 3, Dean Drive, Fort Wayne, https://fwrc.info/event/fwrc-tailgate-hamfest/, Public Contact: Steve Nardin W9SAN, Email: w9san@arrl.net
August 12	Hendricks County Tailgate Fest, Avon United Methodist Church, 6850 E. US Hwy 36, Avon, http://hendricksares.org/, Public Contact: Kenneth A Kayler KC9SQD, Phone: 317-874-7068, Emailkc9sqd425@gmail.com

August 12 – 13 `ARRL EME Contest https://www.arrl.org/eme-contest

WA7BNM expanded contest calendar, https://www.contestcalendar.com/contestcal.htm

COMMERCIAL INTERESTS PETITION FCC FOR HIGH POWER ALLOCATION ON SHORTWAVE SPECTRUM

The ad hoc group “Shortwave Modernization Coalition” petitioned the Federal Communications Commission (FCC) to allow data communications on multiple bands within the HF 2 – 25 MHz range with up to 20 KW, including in bands immediately adjacent to spectrum allocated to the Amateur Radio Service. This group appears to represent high-speed stock trading interests. The FCC has assigned it RM-11953. Comments are due by July 31, 2023, and reply comments by August 15. While the petitioners exclude the amateur bands, high power operations on immediately adjacent bands are proposed. ARRL The National Association for Amateur Radio® is reviewing the petition.

W6LG comments: https://youtu.be/VeG00x89ATI

This petition marks the first major proceeding to revise the rules governing the shortwave frequencies above 2 MHz and below 25 MHz since the 1940s.

The Shortwave Modernization Coalition thinks the 2-25 MHz band is underused and wants to use it for the long-distance transmission of time-sensitive data from fixed stations. The users would be companies working with certain kinds of financial transactions; the proposal would prohibit voice transmission and mobile operations.

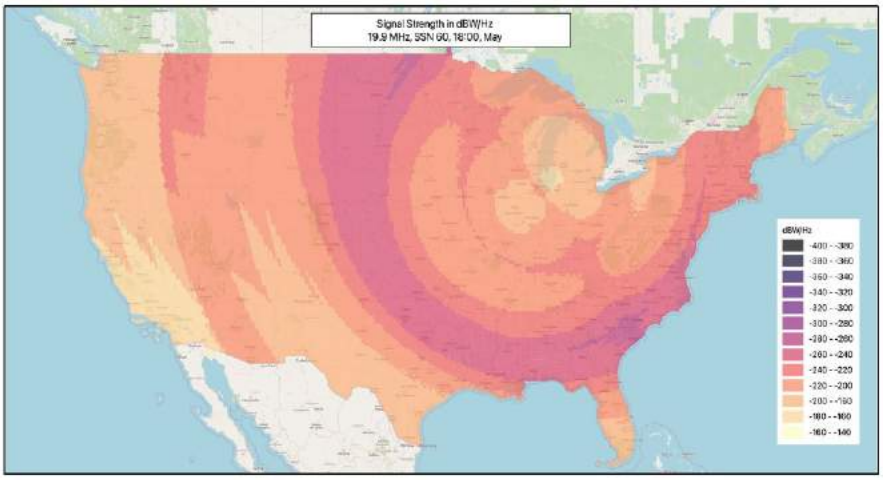
The firms in the coalition are “market makers and liquidity providers” for exchange-traded financial instruments.

This high-frequency trading industry has in fact been using shortwave links for several years to send trading data between U.S. and foreign exchanges, but it has done so under experimental authorizations.

While the stations’ locations and frequencies are public data, the FCC has withheld key details of those operations from public disclosure, according to Bennett Kobb of Experimental Radio News, who follows this topic.

Experimental licenses are not intended for ongoing revenue operations. Now several major players in that industry (they are listed at the bottom of this story) coalesced into the SMC to petition for regular ongoing revenue operations under Part 90 of the FCC rules.

Details



“Market makers” are financial institutions or individuals that participate in a capital market by buying and selling securities such as stocks, bonds and derivatives. They typically maintain an inventory of securities they are willing to buy and sell at publicly quoted prices from and to other traders, investors and institutions, according to SMC. It said these practices contribute to an efficient market system.

The coalition notes that transmissions at 2-25 MHz can travel over thousands of miles via skywave propagation, making this part of the spectrum ideal for transmission of relatively low-bandwidth data over long distances with minimal delay.

But it says current rules limit the frequencies to public safety, aeronautical, maritime, amateur and limited Part 90 Industrial/Business Pool uses. It believes the rules governing those Part 90 uses are out of date technically.

It believes that allowing its proposed uses on a non-exclusive, licensed basis will not impinge on existing users in that spectrum.

Its proposed amendments would enhance the ability of users to access “real-time financial data and continue to act in a manner to improve asset prices, to the benefit of centralized markets and market participants,” the coalition wrote. The changes also have the potential to spur additional innovations in the use of these frequencies, it said.

“The availability of 2-25 MHz band frequencies for such use also would obviate the need for businesses that require the fixed, long-distance transmission of time-sensitive data to rely on fiber, microwave and millimeter wave wireless, and satellite systems, which are costly, not capable of achieving comparably short transmission delay, and can be less secure than 2-25 MHz band transmission systems,” SMC wrote.

The group says this part of the spectrum has long been underutilized in the U.S., despite advantages including the need for only one transmit site and one receive site for transmissions over entire continents and oceans.

“In contrast, radio frequency transmissions via microwave and millimeter wave spectrum require multiple transmit and receive links to travel even relatively short distances.”

The SMC acknowledges there would be technical challenges. “The approximately 11-year solar cycle causes variations in sunspot activity, resulting in changes to the levels of solar electromagnetic radiation that reach Earth. This, in turn, causes fluctuations in the altitude of the ionosphere at different times of day and from year-to-year. In addition, electromagnetic frequency noise in the 2-25 MHz Band is quite high as compared to other spectrum bands.”

However, its members have used their experimental licenses to develop technical solutions that enable switching among available 2-25 MHz band frequencies to overcome these challenges. It says this minimizes the likelihood that high-frequency spectrum transmission technologies will cause or experience harmful interference.

Although each experimental system is unique, the coalition wrote, they all avoid interference through technologies like “listen before transmit”; automatic frequency changes in the presence of other signals; and custom, in-house software and frequency agility.

The group submitted a technical report in support of its proposal. The software-based study considered four transmission cases representative of long-distance use cases including transmitting from New York west to Los Angeles; from Chicago to Seattle; from New York to São Paulo, Brazil; and from Chicago to London, U.K. It used several frequencies, with 20 kW transmit power and a transmitter bandwidth of 10 kHz.

“The 2-25 MHz band is the optimal transmission medium for reducing delay in the long-distance transmission of the data essential to their market making activities,” the coalition concluded.

The coalition includes DRW Holdings, IMC Trading, Jump Trading Group, Virtu Financial Inc., NLN Holdings, Optiver Services and Tower Research Capital. Those firms are affiliated variously with experimental licensees Skycast Services, Toggle Communications, RCA Telecom, 10Band, County Information Services, m-Wave Networks, Rockland Wireless and Alpha Bravo Communications.

ARRL LABORATORY STUDY OF HF PETITION ONGOING, FILED COMMENTS TO FOLLOW

ARRL is treating a petition before the Federal Communications Commission (FCC) to allow data communications on multiple bands within the HF 2 - 25 MHz range with up to 20 KW as a subject of concern for its members and the greater Amateur Radio Service. ARRL Laboratory staff are studying the matter from a technical standpoint, including analysis of transmitted signals potentially interfering with Amateur Radio communications on Amateur Radio spectrum. The results from this expert review are being finalized and will inform ARRL's filed comments on the matter.

ARRL has heard from many members and other licensed radio amateurs who share interest and concern about this petition. Read more about our efforts here.

Filers Seek Extension on Shortwave Petition. ARRL to File Comments.

[Updated 7/31/2023] Since May, ARRL The National Association for Amateur Radio® has been reviewing the rules proposed in a petition before the Federal Communications Commission (FCC) from the “Shortwave Modernization Coalition” (SMC). The ARRL Laboratory has been studying the petition out of concern for potential interference to Amateur Radio communications.

Comments on the petition, RM-11953, were due to FCC by July 31, 2023 (see previous ARRL News story). However, a 30-day extension of time was requested by both Skywave Networks LLC and FlexRadio Systems.

The timely request from Skywave automatically triggered an extension to the filing deadline. Under FCC rules, when a request for extension is made within the appropriate timeframe, commenters may file comments until a date set by FCC when it rules on the extension request, or no earlier than two business days after the FCC decision. On Monday, July 31, the FCC denied the request for extension. Comments therefore may continue to be filed through Wednesday, August 2.

In its petition, SMC, a group that appears to represent high-speed stock trading interests, has proposed amending the FCC Part 90 rules to allow introduction of high-power digital communications to the shortwave spectrum that in many instances is immediately adjacent to the amateur HF bands.

ARRL’s comments on the matter will be based on the analysis by its laboratory and guided by its experienced Washington, D.C. regulatory affairs counsel. ARRL will use the extension to best represent the interests of its members and the Amateur Radio Service.

ARRL MEMBERSHIP DUES INCREASE EFFECTIVE JANUARY 1, 2024

The ARRL Board of Directors completed their second annual meeting and they made the tough, but necessary, decision to increase the regular membership dues rate to $59 a year starting January 1, 2024.

Additionally, we have chosen to separate the printed, mailed magazine from regular membership. Members will be able to choose whether they want to add-on a print subscription to any of our magazines including *QST*, *On the Air*, *QEX*, and *NCJ*. All members will continue to have online, digital access to each of these four magazines and the digital archive as part of their regular membership benefits.

Summary of Dues Changes (effective January 1, 2024:

Regular dues (in the US) will increase to $59 per year on January 1, 2024.

•Members will continue to have access to *QST* and *On The Air* (*OTA*) magazines in digital form online.

— Print-and-mailed *QST* and *OTA* magazines become optional add-ons to membership. Each magazine subscription is $25 per year.

— Those with regular memberships (a remaining term on a current membership) will need to purchase an add-on subscription to continue receiving printed *QST* and *OTA* after January 1, 2024.

— Current Life members as of July 2023 may choose to continue receiving printed *QST* or *OTA* at no additional cost by contacting ARRL between September 1, 2023, and June 30, 2024.

•Monthly payment plan options are being created for members aged 70+ to help senior members who are experiencing financial stress.

•We are undertaking work to determine revenue neutral pricing for Life Memberships. New applications for Life Membership are not being accepted as of 7/21/2023 while new rates are being established.

This is only the second time in 22 years that ARRL has raised our dues. It is a necessary part of ensuring ARRL is supported so we can continue to promote and fight hard for our Amateur Radio Service, while providing benefits and services for our members that increase your knowledge and enjoyment of ham radio.

To help us make this decision, we invited every ARRL member to participate in a survey in May. Over 20,000 members responded (you can view the survey results here). We know from the survey results that most of you will find the new rate reasonable, or even ask why we didn't set it higher. We also know that some may find the rate is too high. As I've shared with many of you during my visits at hamfests and conventions, each of us has a responsibility to be active participants, and to support ARRL if we want to increase our ranks and ensure a lasting legacy for amateur radio's future.

You told us that you value ARRL's advocacy efforts, including spectrum defense, standing up to regulators and policymakers, and our work in other areas that defend, promote, and grow amateur radio - including STEM outreach to schools, teachers, and youth. **There is no other organization that is working harder to advance a vision that allows any citizen to explore, develop, and practice radio communications and radio technology.**

TEACHERS GATHER FOR STEM TRAINING AT ARRL

A group of educators were at ARRL Headquarters in Newington, Connecticut, the week of July 13, 2023, for the ARRL Teachers Institute on Wireless Technology. The 13 teachers were from all over the country, and they were in town to learn hands-on STEM activities through amateur radio. "They liked foxhunting and satellite contacts the best," said ARRL Education and Learning Manager Steve Goodgame, K5ATA.

ARRL holds five sessions each year, and each session is 5 days in length. The Teachers Institute is an expenses-paid professional development program filled with lectures, hands-on activities, and demonstrations that are intended to provide teachers with tools and strategies to introduce basic electronics, radio science, satellite communications, amateur radio, weather science, microcontrollers, and electronic sensors to their students. "The whole idea is to inspire teachers to go back and inspire their students to be excited about amateur radio," said Goodgame.

Support for the institute is provided by donations from amateurs like you to the ARRL Education & Technology Fund.

W1VCM RECEIVES GRANT FOR THE VINTAGE RADIO AND COMMUNICATIONS MUSEUM

The amateur radio club of the Vintage Radio and Communications Museum of Connecticut, W1VCM, has received a grant to design and implement new antennas that cover frequency ranges available to US radio amateurs and add Earth-space capabilities to their shack.

"These new capabilities will allow club members to show the full range of technologies that make amateur radio the unique lifetime hobby it is," said club President Bob Allison, WB1GCM. "Over the years, these demonstrations have encouraged more than a few visitors to pursue their amateur radio licenses. These improvements will allow our visitors to better engage with technologies that impact their everyday lives," he added.

The museum is run by volunteers and it opened in September 1990. It is dedicated to the preservation of old-time communications equipment and to educating the public about communication systems of the past.

The new functionality will include computer-controlled tracking, a high-gain antenna system, and a new satellite transceiver that allows communications to the International Space Station and several low-Earth orbit amateur satellites.

Vintage Radio and Communications Museum of Connecticut Director John Ellsworth emphasized the importance of the amateur radio club as part of the story of communications, stating, "During our docent-led tours, we discuss the history and development of radio and television. Having a working radio station available reinforces many of the topics discussed."

The grant was awarded by Amateur Radio Digital Communications.

AMATEUR RADIO OPERATORS ARE NEEDED FOR A REAL-WORLD SCIENCE EXPERIMENT DURING UPCOMING SOLAR ECLIPSE EVENTS

Members of the Ham Radio Science Citizen Investigation (HamSCI) will be making radio contacts during the 2023 and 2024 North American eclipses and probing the Earth's ionosphere. The Solar Eclipse QSO Parties (SEQPs) are set to be fun and friendly with a competitive element, and all amateur radio operators and shortwave listeners are invited to participate. The upcoming eclipses (October 14, 2023, and April 8, 2024) provide unique opportunities to study interactions between the sun and the ionosphere. As participants and HamSCI members transmit, receive, and record signals across the radio spectrum during both eclipse events,

valuable data will be created to test computer models of the ionosphere. Learn more at https://hamsci.org/projects. *ARRL is a partner with HamSCI for the SEQP.*

THE NEW GENERAL-CLASS LICENSE QUESTION POOL TOOK EFFECT ON JULY 1.

"ARRL Volunteer Examiners (VEs) are administering the new General-class exams," said ARRL VEC Manager Maria Somma, AB1FM. Somma suggests that candidates first take a practice test using ARRL Exam Review.

"If you're already passing online practice exams, then you're ready to search for an in-person exam session team, or you can take the exam online via a remote video-supervised session." Visit the exam session search page on the ARRL website.

The new General-class question pool is valid for examinations taken between July 1, 2023, and June 30, 2027. "Upgrading from a Technician-class license to General-class significantly opens more operating privileges on HF bands," added Somma.

Study Guides
The ARRL Ham Radio General Class License Manual 2023-2027
General Class study guide by W5YI, Gordon West 2023-2027
AD7FO Study Guides 2023-2027 (Free PDF Online)

Great sites for the Question Pool, and Practice Exams:

https://hamexam.org/ Question pool and practice exams

http://www.eham.net/exams/ popular amateur radio site with practice exams

http://www.arrl.org/exam-practice ARRL practice exams

http://qrz.com/hamtest popular amateur radio site with practice exams

https://hamexam.org/ good practice exam with question pool and flash cards

HEALTH UPDATE FROM BOB HEIL, K9EID

Most of us know or have heard of Bob Heil, K9EID and the audio products he produced over the years for ham radio. He gave a couple of presentations regarding audio for radio at the Indianapolis Radio club not too long ago (via Zoom). Bob and Gordon West started the popular "Ham Nation" podcast series that continues today. Bob attributes his success in the professional audio field to the knowledge he gained in amateur radio.

The following is what Bob sent to one of the clubs he is a member of, and has been circulated via several ham radio email reflectors:

"Mid June I began feeling weakness in my legs, each days bit more. So much Sarah got me a Rollator walker. I had to quit driving and sold my car. I could still walk a bit but used the walker when going to restaurants, etc. June 30 woke up and when I started to getup of bed, my legs folded under me. Could not support me. Sarah called 911and journey began. Off to Siteman in Shiloh, 15 min from our house.

Four days in the hospital, two weeks in a great rehab facility. Since June 8, no computer and of course no radios. Don't have enough strength or power to turn the T90 or anything else on! Yesterday I was transported to a beautiful assistant living facility in Shiloh where I will be a month and more.

Today my stepson Ash, brought my computer. I now can communicate a bit with my friends although it's difficult. I have Neuropathy in my toes and fingers. Have no power to hold or pick up anything. Can't even make a fist. Difficult to eat but I get it done. Type with one finger. Have to have someone pick me up to the bathroom, shower,etc.

Of course I can't stand or walk. I have stenosis where my spinal cord is pinching the nerve core in neck and in the lumbar. Put it all together and I have three serious things that came up at same time. Muscular degeneration, stenosis and serious neuropathy. ...been seeing Neurosurgeons, etc. July 27 I'll see the Neologist and he holds the key after all the tests,etc.

Just wanted to fill each of you in before rumors and miss information hits the internet . I feel good as long as I am sitting. Really good. I eat well. Food is great and now as I have my computer, I will now have things to keep me busy. I have missed some of the morning AM MOKAM net that I have been a part of since around 2005 and sadly miss each of you. No more hamfests. And trips with ED or trips to Ashland to teach me how to build on pinboard but I know not of what future of my life lies ahead. I love and miss each of you."

Bob is 82 years old now. It sounds as if he is having some pretty major challenges. We wish Bob the best of luck in working through this. ..Tnx KJ9B

SHORTS

Rules Changes Announced for ARRL VHF Contests – Starting with the 2023 ARRL September VHF Contest, participants in the FM Only category can now count contacts on 902 MHz and 1.2 GHz toward their scores. Previously, only contacts on the 4 lowest VHF bands (50, 144, 222, and 432 MHz) counted toward the scores of participants in this category. These new rules will also become effective for the January and June VHF contests in 2024.

See www.arrl.org/september-vhf for rules, entry forms and a complete list of entry categories.

Do you have a Tektronix 465 Oscilloscope? Want one? Here is one you can have for a cool $135,000. Even if you don't want it, it's worth the read: https://www.manhattanrarebooks.com/pages/books/2732/computer-history-apple-atari-steve-jobs-al-alcorn-steve-wozniak/tektronix-465-oscilloscope

Bill to Pre-Empt HOA Antenna Restrictions was Reintroduced in the 118th Congress (2023-2024) – H.R.4006 Amateur Radio Emergency Preparedness Act would remove private land use restrictions that prevent amateur radio operators from installing and using "reasonable antennas" on property that they own or control **--ARRL**

A New "OTA" – Scout Camps On The Air – There's a new "OTA" program joining islands, summits, parks, and lighthouses on the air … Scout Camps On The Air, or SCOTA.

JY1's Ham Station Donated to RSGB – Jordan's late King Hussein was very active on the ham bands; station gear to be displayed at Radio Society of Great Britain's National Radio Centre.

Morse Code is still thriving in amateur radio, 24 years after its last commercial use - On July 12, 1999, the original dot/dash system, invented by Samuel F. B. Morse in 1837, gave way to the rapid development of analog and digital communications. The final message sent in Morse code for commercial use was the same one that Morse hammered out on his telegraph key 155 years earlier in 1844, which was, "What hath God wrought?" But this time the message was followed by SK, meaning silent key, or deceased.

The International Maritime Organization replaced Morse code with the Global Maritime Distress and Safety System -- an automated ship-to-shore and ship-to-ship system that use satellites and/or terrestrial radio systems with digital selective calling technology.

Morse Code is also still used in aviation. Pilots listen to a Morse code identifier to verify that their navigation receivers are tuned to the correct radio aid, such as a VHF Omni-Directional Range (VOR) or Instrument Landing System (ILS) approach guidance system.

Railroads stopped using Morse code in the mid-1970s. While Morse code is no longer used commercially, it is still an integral part of amateur radio.

Amateur radio operators are no longer required to learn Morse code to obtain their license, but many learn the code on their own or by using study guides and taking classes.

Every day, amateurs around the world use Morse code to communicate with each other, test their radio equipment, or pass along friendly information. Morse code is essential in helping people communicate during disasters and emergencies because of its signal ability to penetrate adverse weather issues and propagation disturbance.

ARRL offers a variety of resources for those interested in learning Morse code. Visit http://www.arrl.org/learning-morse-code for more information. **--ARRL**

ARRL is on Threads – The new social media platform from Meta. Connect with your association via our handle @arrlhq. Find all of our social channels and ways to connect at www.arrl.org/arrl-social-media

ARRL On The Air Podcast discusses topics covered in the current issue of On The Air. http://www.arrl.org/on-the-air-podcast

THANKS FOR READING

THE RCA ARC MONTHLY NEWSLETTER IS COMPILED AND EDITED BY JIM RINEHART, K9RU AND JIM KEETH, AF9A. ALL MATERIAL CONTAINED HEREIN IS OBTAINED FROM THE SOURCES CREDITED AND EDITED FOR THIS NEWSLETTER.